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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/626,612	07/25/2003	Shushi Ikeda	240733US0	9365

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EXAMINER

YEE, DEBORAH

ART UNIT PAPER NUMBER

1742

DATE MAILED: 01/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/626,612	Applicant(s) IKEDA ET AL.	
	Examiner Deborah Yee	Art Unit 1742	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 November 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 6-8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 -5 and 9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11-16-05 has been entered.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1 and 3 to 5 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese patent 2000319759 or Japanese patent 2000309853.
2. JP'759 and JP'853, each discloses specific steel example 5 in Table 1 which meets the claimed composition , and exhibits excellent bending properties, and high tensile strength and elongation properties within the ranges disclosed by present invention
3. Moreover, the English abstract discloses steel alloy having a composite microstructure of 5 to 15% retained austenite ( within the claimed retained austenite

ranges of 5 to 30% and 5 to 20%) and a balance of martensite, bainite and ferrite. Even though 50% ferrite as recited by the claim is not taught by prior art, such would be expected since compositional limitations and tensile strength and elongation properties are met, and in absence of proof to the contrary. Moreover, first paragraph on page 6 of applicant's specification discloses present invention alloy may additionally contain bainite and martensite. Hence claims would not patentably distinguish over prior art.

4. Also even though prior art does not teach the limitation of no more than 40 carbide/2000 micron<sup>2</sup> recited by claim 1 or 30 carbide/2000micron<sup>2</sup> recited by 5 or 9 to 40 carbide grains/micron<sup>2</sup> recited by claim 9 between the retained austenite and ferrite, such carbide limitation would be expected since composition and property limitations are met, and in absence of proof to the contrary.

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese patent 2000319759 or Japanese patent 2000309853 as applied to claims 1 and 3 to 5 above, and further in European patent 1201780.

6. JP'759 and JP'853 steel meet the recited claim but fails to contain small amounts of Mo, Ni and/or Cu. These elements, however, are well known in the metallurgical art as conventional additives to further enhance strength and hardening properties in low-alloy steel sheets as evident by paragraphs 46 and 50 on page 8 of EP'780. Hence it would be an obvious modification and a matter of choice well within the skill of the artisan to add Mo, Ni and/or Cu to the steels of JP'759 and JP'853 to produce no more than the known and expected effect of such an addition.

7. Claims 1, 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over European patent 1201780 cited by applicant in IDS dated July 5, 2005.
8. EP789 in claims 1 to 6 discloses a steel sheet having a composition with constituents whose wt% ranges overlap those recited by the claims; such overlap renders applicant's composition prima facie obvious because it would be obvious to one skilled in the art to select the claimed alloy wt% ranges over the broader disclosure of the prior art since similar utility and high strength, bendability and elongation properties are taught. Moreover similar to the present invention, EP'789 in claim 6 discloses a microstructure comprising ferrite as the main phase with 5 to 25% retained austenite.
9. More specifically, EP'780 No.6 specific steel F in Table 3 on page 15 meets the claimed composition and in table 4 on page 17, No. 14 steel F has a 72% ferrite and 10% retained austenite, and meets the claimed microstructure. Even though small amounts of Mo, Ni, Cu, Ca and/or REM as recited by claims 2 and 3 are not included in steel F, such would be obvious to incorporate in view of paragraphs 46 and 49 on page 8 of EP'780.
10. Also even though prior art does not teach the limitation of no more than 40 carbide/2000 micron<sup>2</sup> recited by claim 1 or 30 carbide/2000micron<sup>2</sup> recited by claim 4 or 9 to 40 carbide grains/micron<sup>2</sup> recited by claim 9 between the retained austenite and ferrite, such carbide limitation would be expected since composition and property limitations are closely met, and in absence of proof to the contrary. Moreover, prior art steel sheet is processed in substantially the same manner as taught by applicants. See prior art claim 12 on page 20 wherein steel sheet is subjected to heating and holding at

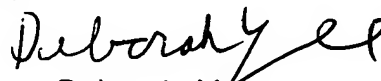
Ar1 to Ar3 (encompasses 700+/-30C) for 1 to 20 seconds (overlaps 10 to 30 seconds), cooling at 20C/sec or higher (within greater than 10C/sec) to a temperature of 350 to 450C (within the range 400+/-50C).

11. The relevant references cited by the European Search Report have been considered by the examiner and the closest reference, EP1201780, has been applied to this office action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah Yee whose telephone number is 571-272-1253. The examiner can normally be reached on Monday-Friday from 6:00 to 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Deborah Yee  
Primary Examiner  
Art Unit 1742

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